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399 F.2d 269

Application of Herman HOEKSEMA.

*Patent Appeal No. 7778.***United States Court of Customs and Patent Appeals.***August 8, 1968.*

Earl C. Spaeth, Kalamazoo, Mich., (Eugene O. Retter, George T. Johannesen, Kalamazoo, Mich., of counsel), for appellant.

Joseph Schimmel, Washington, D. C., (Jack E. Armore, Washington, D. C., of counsel), for Commissioner of Patents.

Before WORLEY, Chief Judge, and RICH, SMITH, ALMOND and KIRKPATRICK\*, Judges.

SMITH, Judge.

1 In our prior consideration of this appeal, we affirmed the decision of the Patent Office Board of Appeals, which had affirmed the examiner's rejection of the sole remaining claim of appellant's application.<sup>1</sup> In re Hoeksema, 379 F.2d 1007, 54 CCPA 1618 (1967). Because of the continuing importance of the questions involved, and the strong suggestion of error in our earlier opinion, we granted appellant's petition for a rehearing under the provisions of Rule 7 of this court, 55 CCPA \_\_\_, (October 5, 1967).

2 The parties filed new briefs, and the case was reargued on January 3, 1968. Upon reconsideration of our previous decision, we have concluded that our previous decision was erroneous and that a proper resolution of the issues requires that we reverse the decision of the board.

3 The facts are set forth in our original opinion. We shall assume familiarity with that statement of facts and shall here redevelop only those which we now believe were previously misapprehended or misapplied and require the present decision.

4 The sole claim on appeal is directed to a chemical compound and reads as follows:

1. An N-psicofuranoside having the formula:

5 NOTE: OPINION CONTAINING TABLE OR OTHER DATA THAT IS NOT VIEWABLE

wherein A is selected from the class consisting of hydrogen, the group-XR wherein R is selected from the class consisting of hydrogen, lower-alkyl, and lower-aralkyl, and X is selected from the class consisting of oxygen and sulfur, and the group NOTE: OPINION CONTAINING TABLE OR OTHER DATA THAT IS NOT VIEWABLE wherein R<sub>2</sub> is selected from the class consisting of hydrogen, lower-alkyl, lower-aralkyl, and lower-aryl, and R<sub>3</sub> is selected from the class consisting of lower-alkyl, lower-aralkyl, and lower-aryl, and R' is selected from the class consisting of hydrogen, a hydrocarbon carboxylic acid acyl radical containing from two to twelve carbon atoms, inclusive, and a halo-, hydroxy-, lower-alkoxy-, amino-,

6 cyano-, thiocyanato-, and nitro-substituted hydrocarbon carboxylic acid acyl radical  
7 containing from two to twelve carbon atoms, inclusive.  
8 *as up*

7 That claim stands rejected under 35 U.S.C. § 103 as unpatentable over prior art,  
on this record limited solely to the De Boer et al. patent<sup>2</sup> (De Boer) which discloses  
a compound with the structural formula:

8 NOTE: OPINION CONTAINING TABLE OR OTHER DATA THAT IS NOT  
VIEWABLE

9 As we noted in our original opinion, the controversy here is limited to the  
substituent A at the 6-position of the purine ring system. Although a compound  
having De Boer's structure is not included in the appealed claim since A in the claim  
cannot be an unsubstituted or primary amino, NOTE: OPINION CONTAINING  
TABLE OR OTHER DATA THAT IS NOT VIEWABLE, the basic structure of the De  
Boer compound is similar to the structure of appellant's alkyl-amino and  
dialkylamino compounds.<sup>3</sup>

10 Despite this close structural similarity between the De Boer amino compound  
and the alkylamino and dialkylamino compounds included in the appealed claim,  
appellant chose not to submit a showing of unexpected properties in his claimed  
compounds.<sup>4</sup> Appellant asserted that his compounds were unobvious and  
patentable without such a showing. He urged that De Boer does not teach one of  
ordinary skill in the art how to make appellant's claimed compounds, and the  
examiner did not cite any other reference telling how they might be made.  
Therefore, in appellant's view, his claimed compounds are not in possession of the  
public, *In re Brown*, 329 F.2d 1006, 51 CCPA 1254 (1964).<sup>5</sup>

11 In support of his position, appellant submitted an affidavit by Dr. Paul F. Wiley  
relating to the unavailability to the public of processes for preparing appellant's  
alkylamino and dialkylamino compounds.<sup>6</sup> Dr. Wiley's qualifications and  
competence as an expert to state facts and opinion in this area of chemistry were  
not challenged.

12 Regarding the Wiley affidavit, the examiner stated, in his Answer:

13 The affidavit \* \* \* does not appear to be pertinent to the claim now on appeal  
because it is directed to the processes by which the De Boer et al. and appellant's  
compounds are prepared, and shows nothing unobvious for the instantly claimed  
compound.

14 Concerning the Wiley affidavit, the board cited a statement of this court in *In re Riden*, 318 F.2d 761, 50 CCPA 1411 (1963), to the effect that "the method of making  
the compounds is a relevant fact to be considered in the question of obviousness of  
the compounds," 318 F.2d at 764, 50 CCPA at 1415. But the board continued:

15 \* \* \* This may be so but it is only one factor and, in our opinion, should never be  
the overriding one which appellant is here, in effect, urging.

16 Appellant states the first of two central questions to be decided in this rehearing  
as follows:

17 1) Appellant will admit his compounds are obvious and unpatentable *if* an  
obvious process is available to make them. Does it follow then that appellant's  
compounds are unobvious and patentable *if* an obvious process is *not* available to  
make them?

18 Within this context, appellant simplifies that question to: Is process obviousness  
relevant in deciding compound obviousness?<sup>18</sup>

19 The solicitor responds to the latter characterization of the question in the  
affirmative, pointing out that the first question bears on the principle implicit in *In  
re Brown*, *supra*, that claimed compounds not distinguished in their properties over  
closely related prior art compounds are unpatentable thereover where the claimed  
compounds would be "in possession of the public" in that a process for preparing  
them would be obvious to those of ordinary skill in the art.

20 In addition, the solicitor now refers to our prior opinion in which we noted that  
the facts in this case are closely analogous to those of *In re Riden*, *supra*, where we  
stated that the fact that the method of making the claimed compound is relevant,  
379 F.2d at 1010, 54 CCPA at \_\_\_\_.

21 A recurring problem of analysis which confronted us as we prepared our previous  
opinion, and which still confronts us after the rehearing, has its genesis in a proper  
understanding of the issue as framed by appellant. In effect, appellant agrees that  
since the claimed product is a homolog of a known compound, it would be *prima  
facie* "obvious" under 35 U.S.C. § 103. But this agreement is conditioned on the  
proviso that there is in the prior art an "obvious" process by which to make that  
compound.

22 In the context of section 103, we are not permitted to fragment a claimed  
invention in applying that section. The clear mandate of the statute which governs  
our analysis requires that we consider the *invention as a whole* in making the  
determination.

23 Thus, as we apply the statute to the present invention, we must ask first, what is  
the invention as a whole? Necessarily, by elementary patent law principles, it is the  
claimed compound, but, so considered, unless there is some known or obvious way  
to make the compound, the invention is nothing more than a mental concept  
expressed in chemical terms and formulae on a paper.

24 We are certain, however, that the invention as a whole is the claimed compound  
and a way to produce it, wherefore appellant's argument has substance. There has  
been no showing by the Patent Office in this record that the claimed compound can  
exist because there is no showing of a known or obvious way to manufacture it;  
hence, it seems to us that the "invention as a whole," which section 103 demands  
that we consider, is not obvious from the prior art of record.

25 While there are valid reasons based in public policy as to why this defect in the  
prior art precludes a finding of obviousness under section 103, *In re Brown*, *supra*,  
its immediate significance in the present inquiry is that it poses yet *another  
difference* between the claimed invention and the prior art which *must* be  
considered in the context of section 103. So considered, we think the differences  
between appellant's *invention as a whole* and the prior art are such that the  
claimed invention would not be obvious within the contemplation of 35 U.S.C. §  
103.

While 35 U.S.C. § 102 is not *directly* involved in the issue on review, the  
conditions for patentability, novelty and loss of right to patent, there stated, may  
have relevance as to the disclosure which must be found in the prior art to find  
obviousness of an invention under section 103. In determining that quantum of  
prior art disclosure which is necessary to declare an applicant's invention "not  
novel" or "anticipated" within section 102, the stated test is whether a reference  
contains an "enabling disclosure," in the present context, a process by which the

26 claimed compound could be made. In *In re Le Grice*, 301 F.2d 929, 49 CCPA 1124 (1962), we observed that the resolution of this issue required us to determine whether, as a matter of law, a reference without such a disclosure constituted a statutory time bar to an applicant's right to a patent. There, the issue was founded on 35 U.S.C. § 102(b), not § 103, but our conclusions have a certain pertinence here. We concluded, id. 301 F.2d at 936, 49 CCPA at 1134:

27 We think it is sound law, consistent with the public policy underlying our patent law, that before any publication can amount to a statutory bar to the grant of a patent, its disclosure must be such that a skilled artisan could take its teachings in combination with his own knowledge of the particular art and be in possession of the invention. \*\*\*

28 In *In re Brown*, *supra*, this court discussed *In re Von Bramer*, 127 F.2d 149, 29 CCPA 1018 (1942), commenting that that opinion should not be construed to encompass what had come to be called the "Von Bramer doctrine." There we stated, 329 F.2d at 1009, 51 CCPA at 1257:

29 \*\*\* This doctrine, which appears to have resulted from *In re Von Bramer* et al., supra, seems over a period of years to have been tailored in some quarters to a principle which defeats the novelty of a chemical compound on the basis of a mere printed conception or a mere printed contemplation of a chemical "compound" irrespective of the fact that the so-called "compound" described in the reference is not in existence or that there is no process shown in the reference for preparing the compound, or that there is no process known to a person having ordinary skill in the relevant art for preparing the compound. In other words a mere formula or a mere sequence of letters which constitute the designation of a "compound," is considered adequate to show that a compound in an application before the Patent Office, which compound is designated by the same formula or the same sequence of letters, is old. We do not think that the *Von Bramer* case should be so construed. [Emphasis added.]

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31 To the extent that anyone may draw an inference from the *Von Bramer* case that the mere printed conception or the mere printed contemplation which constitutes the designation of a "compound" is sufficient to show that such a compound is old, regardless of whether the compound is involved in a 35 U.S.C. § 102 or 35 U.S.C. § 103 rejection, we totally disagree. \*\*\* [Footnotes omitted.]

32 We concluded, relying on *In re Le Grice*, *supra*, and *E. I. DuPont de Nemours & Co. v. Ladd*, 117 U.S.App.D.C. 246, 328 F.2d 547 (1964), that the "true test of any prior art relied on to show or suggest that a chemical compound is old, is whether the prior art is such as to place the disclosed 'compound' in the possession of the public." 329 F.2d at 1011, 51 CCPA at 1259.

33 While *In re Le Grice* was bottomed on an issue arising under 35 U.S.C. § 102 where the reference was a "printed publication," that test, in our view, is also properly applicable to issues arising under 35 U.S.C. § 103. See *In re Brown*, *supra* (pertinent portion quoted above); *Deutsche Gold-Und Silber-Scheideanstalt v. Commissioner of Patents*, 251 F.Supp. 624, 629-630 (D.D.C.1966), affirmed, 397 F.2d 656 (D.C.Cir. 1968).

Thus, upon careful reconsideration it is our view that if the prior art of record fails to disclose or render obvious a method for making a claimed compound, at the time the invention was made, it may not be legally concluded that the compound itself is in the possession of the public.<sup>8</sup> In this context, we say that the absence of a

34 known or obvious process for making the claimed compounds overcomes a  
presumption that the compounds are obvious, based on close relationships between  
their structures and those of prior art compounds.

35 The second aspect of the questions presented by this rehearing involves the issue of whether the burden is on the Patent Office to provide the evidence on which to predicate process obviousness.

36 35 U.S.C. § 101 states, in its preamble, that an applicant is *entitled* to a patent unless certain patent-defeating provisions are met. The substantive patent-defeating provisions are encompassed in 35 U.S.C. §§ 100-103.

37 As we have stated, the Patent Office search resulted in citation of the De Boer reference which, under the prevailing law, rendered appellant's claimed compounds *prima facie* obvious. In other words, its citation shifted to appellant the burden of going forward with contrary evidence. Appellant filed the affidavit of Dr. Wiley which points out as a fact that De Boer — the only reference being relied on — does not disclose a process for producing the different compounds here claimed.

38 We think that portion of the Wiley affidavit set forth, *supra* note 6, states facts which were legally sufficient to overcome the position of the Patent Office as to the legal effect under section 103 of the De Boer reference.<sup>9</sup> Appellant's responsibility to overcome this reference as a "patent-defeating" reference under section 103 at that point in the prosecution was only to overcome De Boer as a reference pertinent to the issue of obviousness under section 103.

39 We think the Wiley affidavit is clearly sufficient for this purpose. The affidavit points out that there is no indication in the De Boer patent that the fermentation process used to produce De Boer's compounds could be used to produce appellant's compounds. Since we are of the view that the method for making the compounds is an integral part of the "invention as a whole" which we must consider under section 103, we conclude that the burden of going forward with proofs to support its position as to obviousness of the claimed invention shifted to the Patent Office upon appellant's filing of the Wiley affidavit.

40 The failure of the Patent Office to produce such evidence requires that the decision of the board be reversed.

41 Reversed.

42 WORLEY, C. J., did not participate.

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Notes:

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\* Senior District Judge, Eastern District of Pennsylvania, sitting by designation

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<sup>1</sup> Claim 1 in Serial No. 30,770, filed May 23, 1960, for "9-D-Psicofuranosylpurine and 6-Substituted Derivatives." Claims 2 and 11-25 stand allowed

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<sup>2</sup> Patent No. 3,094,460, issued June 18, 1959 on an application filed January 20, 1959

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<sup>3</sup> Appellant, in effect, admits that there is such a "structural similarity" between his claimed compounds and the prior art compounds as to raise an "inference of fact" that they are not patentable within the meaning of 35 U.S.C. § 103. See *In re Papesch*, 315 F.2d 381, 50 CCPA 1084 (1963); *In re Mills*, 281 F.2d 218, 47 CCPA 1185 (1960)

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<sup>4</sup> Such a showing often has been treated by this court as overcoming a case of "prima facie obviousness" or the "inference of fact" that the compounds are obvious. See, e. g., *In re Papesch*, *supra* note 3 and cases cited therein

<sup>5</sup> For the applicability of *In re Brown*, *supra*, to other factual contexts, see *In re Bird*, 344 F.2d 979, 982, 52 CCPA 1290, 1294 (1965); *In re Sheppard*, 339 F.2d 238, 242, 52 CCPA 859, 864 (1964); *Dix-Seal Corp. v. New Haven Trap Rock Co.*, 236 F.Supp. 914, 921 (D.C.Conn. 1964)

<sup>6</sup> After setting forth his qualifications and stating that he had read and understood both appellant's application and the prior art patent, Dr. Wiley stated:

THAT, 6-amino-9-D-psicofuranosylpurine is a systematic name for "psicofuranine" which is disclosed in column 6, lines 46-62 of the aforesaid patent;

THAT, according to the aforesaid patent, 6-amino-9-D-psicofuranosylpurine is produced by a fermentation process involving the action of a specific microorganism, *S. hygroscopicus* var. decoyinine, in certain aqueous nutrient media;

THAT, *there is no indication in the aforesaid patent [De Boer] that the aforesaid fermentation process could be used to produce 6-lower-alkylamino - 9 - D - psicofuranosylpurines, 6 - di - lower - alkylamino - 9 - D - psicofuranosylpurines, or other 6 - substituted - amino - 9 - D - psicofuranosylpurines;*

THAT, he does not believe the aforesaid fermentation process could be adapted to the production of the aforesaid 6-lower-alkylamino-9-D-psicofuranosylpurines, 6-di-lower-alkylamino-9-D-psicofuranosylpurines, or other 6-substituted - amino - 9 - D - psicofuranosylpurines;

THAT, *the aforesaid 6-amino-9-psicofuranosylpurine could not be transformed by direct chemical substitution of the 6-amino group to a 6 - lower - alkylamino 9 - D - psicofuranosylpurine, a 6-di-lower alkylamino 9 - D - psicofuranosylpurine, or other 6 - substituted - amino - 9 - D - psicofuranosylpurines, and that such transformations could be carried out only by a complex multi-step procedure such as that described in the aforesaid patent application Serial No. 30,770. [Emphasis added.]*

<sup>7</sup> To this extent, appellant has misstated his argument. That process obviousness is relevant in this context is clear from *In re Riden*, *supra*. See also *In re Chapman*, 35 F.2d 418, 53 CCPA 978 (1966); *In re Burt*, 356 F.2d 115, 53 CCPA 929 (1966); *In re Schechter*, 205 F.2d 185, 40 CCPA 1009 (1963)

We think appellant really means to say that the question is whether a claimed compound may be said to be legally obvious when no process for making that compound is shown in the prior art relied upon to establish legal obviousness under section 103.

<sup>8</sup> In *Phillips Petroleum Co. v. Ladd*, 219 F.Supp. 366 (D.D.C.1963), in considering a rejection arising under 35 U.S.C. § 102, the District Court agreed with this court that the mere naked statement of the invention does not put anyone in possession of the invention. That court was careful to note that no process had been shown in the reference for preparing the compound and that no process was known to one of ordinary skill in the art for preparing the compound

In *Ex parte Wall*, 156 USPQ 95 (P.O. Bd.App.1964), the board considered a rejection under 35 U.S.C. § 102 of a claim reading "Perfluorostyrene." In reversing the examiner, the board commented that the examiner did not contend that the reference disclosed how perfluorostyrene is made, nor did he point to any extraneous evidence which would indicate that those skilled in the art knew how to make that compound.

<sup>9</sup> We think this approach to be eminently fair to all parties and in accord with the opinion of the Supreme Court in *Graham*, in its requiring that all of the pertinent evidence be considered while yet leaving the primary responsibility for sifting out unpatentable material with the Patent Office, *Graham v. John Deere Co.*, 383 U.S. 1 at 18, 86 S.Ct. 684, 15 L.Ed.2d 545.

It would be practically impossible for an applicant to show that all known processes are incapable of producing the claimed compound.

43 *up*

KIRKPATRICK, Judge (dissenting).

44 I am unable to agree with the result reached by the majority. The reasons for my dissent appear in the overruled opinion *In re Hoeksema*, 379 F.2d 1007, 54 CCPA 1618 (1967).